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ABSTRACT

The Degrees of Reading Power test (DRP) and its related technology are described in this publication. It contains a brief description of the DRP, which was designed to measure the most difficult level of text that a student can read with comprehension; a report on the validation of the test; sample DRP passages; an instructional viewpoint as it relates to reading comprehension; and teaching strategies for improving comprehension. (FL)

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DEGREES OF READING POWER

Description of a New Kind of Reading Test

and

Its Related Technology

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FOREWORD

It is the purpose of this bulletin to introduce school administrators and teachers to the Degrees of Reading Power test (DRP) and its related technology. The bulletin contains a brief overview of the DRP, a report on the validation of the test, sample DRP passages, an instructional viewpoint as it relates to reading comprehension, and teaching strategies for improving comprehension.

INTRODUCTION

In 1976, the Board of Regents, with the support of a grant from the Carnegie Corporation, began developing a new reading test entitled Degrees of Reading Power (DRP). This was in response to the need for a test which could be used to answer questions such as "What can my child read?", "Can students leaving school read materials they will encounter on the job?", "Which of several programs will be most effective in teaching students to read?". In order to answer these questions, the DRP was designed to measure the most difficult level of text that a student can read with comprehension.

The DRP consists of a series of non-fiction prose passages on topics randomly selected from the Encyclopedia Britannica. The passages are presented in order of difficulty beginning with very easy text and progressing by degrees to very hard text. Test items are created by the deletion of seven words in each passage, with the student selecting the most appropriate word from the five options provided for each deletion. In order for the student to answer DRP questions correctly, (s)he must read and comprehend the text pertaining to those items. This represents a clear contrast with some conventional reading tests, where questions can sometimes be answered without reading the pertinent text. (See pages 6 through 9 for sample DRP passages.)

SPECIAL FEATURES OF THE DRP

Measures Comprehension In accord with the current viewpoint of many reading experts and linguists concerning how reading comprehension is properly defined, the DRP is built to measure a student's ability to derive meaning from connected prose text comprised of multiple sentences. Under this definition of reading comprehension, the test measures not only the student's understanding of the messages within particular sentences, but also his or her ability to integrate meaning across sentences, so that (s)he can understand the more extended messages denoted in text. According to the theory of the test, the student responds correctly to all (or nearly all) items until (s)he comes to a point where (s)he can no longer understand the passage sufficiently well to grasp the context surrounding test items, and hence can no longer decide which option is correct.

The DRP is designed to measure the student's ability to comprehend text of a given level of readability (difficulty). The purpose of the DRP is to serve as an outcome measure, a measure of the end result of reading instruction, rather than as a measure of subskills. The decision to build a test to measure the final outcome is supported by research evidence questioning the independence of subskills, at least beyond the initial stage of decoding. In contrast with other reading tests, the DRP is designed to identify the most difficult text a student can read with comprehension.

Difficulty Controlled The difficulty, or readability, of each DRP

passage is objectively determined using the Bormuth Formula*, believed to be the best readability formula available. Readability is a characteristic of textual materials and is based on important, universal properties of language. The passages on the DRP are arranged so that each is one degree or step more difficult on the readability scale than the passage before it.

The difficulty of the deleted words and their options is held constant, and the test gets harder only with respect to the continuous text students must comprehend. Correctly answering test questions, therefore, measures comprehension of text at increasing levels of difficulty and this ability measure is not confounded with the vocabulary difficulty of the response options.

Information in Text All the information that is needed to answer the questions correctly is presented in the text; there is no need to supply information from memory and past experience in order to answer questions. The DRP does not attempt to make fine discriminations among attractive distractors; right answers are unambiguously correct, and wrong ones are unambiguously incorrect.

Absolute Scale The DRP has been developed to measure a student's ability without reference to other students. The scaling method used enables the DRP to measure ability on one continuous scale, thereby eliminating the measurement error involved in going between the levels used for different grades on conventional tests.

Predicting Performance on Prose Tasks The DRP has been scaled with the Rasch model and the "average" item difficulty per passage has been correlated with Bormuth readability. This makes it possible to relate a student's total number right on the DRP to a set of predictions concerning the most difficult prose reading materials which that student can comprehend with given probabilities. The probability levels which can be reported are: the independent level, where $p=.90$, the instructional level, where $p=.75$, and the frustration level, where $p=.50$. This will enable the teacher to assign materials to students based on their probability of success at handling the materials.

Since the DRP can be used to match instructional materials to the student's reading capabilities, it may be possible to prevent the boredom and frustration that can occur when students are faced with materials that are too easy or too difficult for them relative to the type of instruction to be provided, and can also tend to maximize the effective use of classroom time.

Sensitive Measure of Individual and Group Gain The unique characteristics of the DRP make it a more sensitive measure of

*This formula takes into consideration such variables as word length, sentence length and the proportion of difficult words in a passage.

individual and group gain in reading than was previously available. The methods of test construction used for the DRP serve to minimize artifacts of measurement which often thwart efforts to assess growth. Thus, the DRP can appropriately be used to evaluate the outcomes of reading instruction or to gauge an individual's growth over a relatively short period of time.

VALIDATION STUDIES

Introduction The following represents a brief summary of the validation work of the DRP to date.

A set of studies was executed to validate the DRP and to determine whether the objectives of the test were met. These objectives were: (1) to generate item (passage) difficulties which could be shown to have empirical meaning in terms of linguistic factors which are known to account for readability, such as word frequency, word length, and sentence length; (2) to allow the test to be objectively criterion-referenced by showing that adult, grade-level or other readability requirements validly correspond to test scores; (3) to enable the test to predict information gain from ordinary prose in "real life" situations; (4) to be "culture-fair"; and (5) to be sensitive to growth. These studies involved 4th and 6th grade students and had n's varying between 200 and 6,000 subjects. Each study was randomly assigned to a geographically representative sample of schools in New York State with minority populations which varied between 20 and 80 percent.

Procedures and results corresponding to the enumerated objectives 1-5 above

(1) The data for a pretest (January, '77)-posttest (June, '77) study (N=6,000) were decomposed using the Rasch model. (If a subject took Form X in the pretest, Form Y was taken on the posttest six months later.) The pretest data for both forms scaled successfully, i.e., there was no item which did not fit the model. The linguistic factors (word frequency, sentence length and word length) yielded a multiple of R-.97 with DRP passage difficulty for both forms. In a smaller study using matched subjects (by ability, SES, sex and ethnicity) the difficulty of identical DRP items (sentences and response options) changed when the context was varied from easy to difficult. In the same study it was shown that having subjects read in-range material (prose within the student's comprehension ability) which contained correctly completed DRP items facilitated the performance on those same items when they were presented for completion in out-of-range prose (too difficult, relative to student ability). However, though there was a main effect for the manipulation, the only subjects who attained the mastery criterion for the passage (6 out of 7 correct) were those whose ability was close to the difficulty level of the hard passages.

(2) The more or less sample free DRP passage difficulties for both forms correlated (r-.98) with readability (as measured by Bormuth's mean cloze formula). Thus, one regression equation allows

materials to be matched with student ability.

(3) In another study (N=1500), subjects took the DRP and then, in two additional sessions, a control group took six "hard" cloze tests on material which ranged in difficulty, while experimental subjects read the same material in intact form and then immediately took the "hard" cloze tests. ANOVA of the arcsine transformation of the proportion correct on "hard" cloze resulted in main effects for passages, and for ability. The analysis (within: 6 levels of passage difficulty; between: control versus experimental and 12 ability levels) also resulted in two significant interactions: ability by passage difficulty and ability by passage difficulty by control versus experimental conditions. Information acquisition was a decreasing function of increasing passage difficulty for the highest ability level, whereas for the lowest in-range ability level more of a step-function resulted, with a constant small amount of information gained from the five passages following the one of least difficulty. (The other curves show the transition.) The three-way interaction shows that reading the restored passages before taking the test had an effect on information acquisition in accord with the pattern of the two-way interaction. Essentially, the greater the ability, the higher the scores of the experimental versus the control subjects as the "hard" cloze passages become more difficult.

(4) The "information-acquisition" data base (study 3, above) was used to show that the most difficult level of text from which information can be acquired is the same for all subjects of given ability regardless of sex, ethnicity or socio-economic status (SES). No two-way or three-way interactions of ability with either sex, race or SES were significant. Therefore, DRP ability estimates do not have to be conditioned by any of these variables in order to predict information acquisition or gain on the six hard cloze tasks.

(5) Prose materials were read twice by students. The more the prose was within students' comprehension ability, the more they were aided in comprehending (a week later) a DRP passage, conveying the same message, which was shown to be too difficult for subjects matched to them by DRP ability, sex, race and SES. The results replicated over two topics. Since DRP test items were used as the dependent measure, evidence was obtained that the DRP is a sensitive measure of growth. Only those subjects who were within the instructional range ($p=.75$ correct responses) for the difficult DRP test passage profited from the instructional aid provided by reading easy text conveying the same message as was in the hard passage. These subjects attained the mastery criterion on the items on the hard DRP passage. Subjects of lesser ability, who were initially at or below the frustration level ($p=.50$ correct responses) did not, in accord with expectations derived from the literature on reading instruction, profit from the intervention, i.e. they did not attain criterion on the hard DRP task.

Summary of Studies

Passage difficulties on the DRP have empirical meaning inasmuch as traditional linguistic factors measuring readability account for nearly all the variance in the more or less sample=free passage difficulty scores. Apparently, DRP items are sensitive to shifts in the difficulty of context.

The high correlation between DRP passage difficulty and readability as measured by the Bormuth (and Dale-Chall) formula allows the test to be criterion-referenced through quantitative analyses on reading requirements.

DRP ability scores predict "equally" well for all subject groups (by sex, SES, ethnicity and grade) the acquisition of information from ordinary prose as measured by an independent means. This shows that the measure has predictive validity. It also confirms that the DRP is culture fair.

Since there are very few alternative ways to arrive at the same DRP score and since the scores have meaning in terms of readability, DRP ability estimates describe the prose reading tasks from which an individual can gain information.

SAMPLE DRP PASSAGES AND ITEMS

The Board of Regents
The State of New York
The State Education Department
Albany, New York

NOTE: These sample materials illustrate easy, moderate, and difficult DRP passages and items. Note that these passages represent only three selected points in the difficulty range of the DRP. Note also that only part of each passage has been illustrated: each complete DRP passage has seven items.

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The Arctic is very far north. It is a cold land. It is icy. It is snowy. Winter is long. Winter is hard. Some plants can grow there. But nothing grows tall. Flowers are tiny. Grasses are low. Even the trees are ___1___. They grow lying down on the ground. They can't grow tall. It is too cold.

1 a) wet b) short c) dead d) gray e) bare

Eskimos live in the Arctic. They know how to dress. They wear warm jackets and pants. These are made from animal skins. The fur is worn next to the body. They wear boots made from seal skins. These ___2___ are important. They keep the Eskimo snug. They keep him dry.

2 a) clothes b) journeys c) lamps d) jobs e) homes

In the fall, the sun rises later each day. It sets earlier. Then the sun does not rise at all. It is dark all the time. There is hardly any ___3___. This is the Arctic winter. It is cold. It is dark. It is hard to hunt. So the Eskimo must be ready. He must hunt before winter comes. He must find food. He must put it away. He must ___4___ as much as he can. Then he will have food in winter.

3 a) wind b) water c) light d) soil e) industry

4 a) sleep b) save c) move d) breathe e) drink

Bridges are built to allow a continuous flow of highway and railway traffic across water lying in their paths. But engineers cannot forget the fact that river traffic, too, is essential to our economy. The role of __36__ is important. To keep these vessels moving freely, bridges are built high enough, when possible, to let them pass underneath. Sometimes, however, channels must accommodate very tall ships. It may be uneconomical to build a tall enough bridge. The __37__ would be too high. To save money, engineers build movable bridges.

36 a) wind b) boats c) weight d) wires e) experience

37 a) levels b) cost c) standards d) waves e) deck

In the swing bridge, the middle part pivots or swings open. When the bridge is closed, this section joins the two ends of the bridge, blocking tall vessels. But this section __38__. When swung open, it is perpendicular to the ends of the bridge, creating two free channels for river traffic. With swing bridges, channel width is limited by the bridge's piers. The largest swing bridge provides only a 75-meter channel. Such channels are sometimes too __39__. In such cases, a bascule bridge may be built.

38 a) stands b) floods c) wears d) turns e) supports

39 a) narrow b) rough c) long d) deep e) straight

An indispensable element in the development of telephony was the continual improvement of telephone station instruments, those operating units located at the client's premises. Modern units normally consist of a transmitter, receiver, and transformer. They also contain a bell or equivalent summoning device, a mechanism for controlling the unit's connection to the client's line, and various associated items, like dials. All of these ___78___ have changed over the years. The transmitter, especially, has undergone enormous refinement during the last century.

78 a) parts b) costs c) services d) models e) routes

Bell's original electromagnetic transmitter functioned likewise as receiver, the same instrument being held alternately to mouth and ear. But having to ___79___ the instrument this way was inconvenient. Suggestions understandably emerged for mounting the transmitter and receiver onto a common handle, thereby creating what are now known as handsets. Transmitter and receiver were, in fact, later ___80___ this way. Combination handsets were produced for commercial utilization late in the nineteenth century, but prospects for their acceptance were uncertain as the initial quality of transmissions with the handsets was disappointing. But ___81___ transmissions followed. With adequately high transmission standards attained, acceptance of handsets was virtually assured.

79 a) store b) use c) test d) strip e) clean

80 a) grounded b) marked c) covered d) priced e) coupled

81 a) shorter b) fewer c) better d) faster e) cheaper

TECHNICAL SUPPORT SYSTEM

This section of the bulletin is devoted to the interpretation of DRP scores and to a discussion of those aspects of the DRP which enable teachers and administrators to use students' DRP scores as a basis for organizing reading programs.

Before describing the technology related to the DRP, it is beneficial to supply background information on readability, DRP Units, and levels of reading comprehension.

Readability A perusal of written materials gives evidence that prose materials vary in difficulty or readability, and can range from very easy prose to extremely difficult prose. A number of formulas have been developed, and these formulas can be used to determine the readability or difficulty of prose materials. The Bormuth readability formula is believed to be the best formula developed to date and is the one used in connection with the DRP. The primary factors upon which the Bormuth readability index are based are sentence length, word length, and the proportion of common words, and these factors are measured for each prose selection analyzed by the formula.

The Bormuth formula has been employed in two ways in connection with the DRP: to determine the readability of the DRP passages and to determine the readability of selected prose materials.

DRP Units DRP Units are numerical values adapted from the Bormuth readability index. Once the readability of prose materials has been determined by the Bormuth formula, the results are then converted into DRP Units by the equation: DRP Units = (1-Bormuth value)100.

The DRP index of readability runs from a low of 15 DRP Units for extremely easy reading material to a high of 100 DRP Units for extremely difficult prose material. Therefore, a lower DRP Unit score indicates easier reading material, and a higher DRP Unit score indicates harder material. Commonly encountered English prose materials range in readability from a low of about 25 DRP Units to a high of about 85 DRP Units.

Levels of Reading Comprehension In the literature three levels of reading comprehension are generally identified: independent, instructional, and frustration. These levels are defined in terms of the percent of questions that a given student could correctly answer about the materials written at a given readability level.

The independent level has commonly been defined as the readability level at which a student could answer at least 90% of the comprehension questions correctly. The instructional level has commonly been defined as the level at which a student could answer 75% of the comprehension questions correctly. Materials on which a student can answer correctly

only 50% of the questions are commonly considered to be at the frustration level for that student. Such materials are thought to be too difficult to be used profitably.

Each student's total score on the DRP indicates the readability levels of prose material which that student should be able to read: at the independent level, with a .90 probability of success; at the instructional level, with a .75 probability of success; and at the frustration level, with a .50 probability of success. These readability levels are expressed in DRP Units.

Interpreting DRP Scores

The results of DRP testing can be used for a variety of purposes. Test scores on the DRP can be used for:

- deciding if a student is able to read material required in a course
- matching reading materials to a student's level of ability
- grouping students of comparable reading ability
- measuring individual and group gain in reading ability

It is possible to express a student's reading ability in terms of the difficulty of material that the student can read with comprehension. As explained in the previous section, a student's raw score on the DRP is used to predict the difficulty or readability of materials that the student should be able to read at each of three comprehension levels: the independent level, the instructional level, and the frustration level.

For example, assume that a particular student answered 48 items correctly on the DRP Field Trial Form A. By referring to Figure 1 it can be seen that this student has a .90 (independent level) likelihood of success in reading materials with a DRP Unit value of 39. Materials in which selections are at a level around 39 DRP Units can therefore be used profitably by the student for independent reading. At the instructional level the "lower bound" and "upper bound" denote a range of difficulty. Texts that have a majority of selections within the 47-55 range can therefore be used instructionally with this same student, with a .75 likelihood of success. The further the materials fall toward the upper bound of his or her instructional range (55), the more assistance will be required for the student to use these materials profitably.

Figure 1

PREDICTIONS FROM DRP ABILITY SCORES TO THE READABILITY OF PROSE WHICH CAN BE READ AT DIFFERENT COMPREHENSION LEVELS
FIELD TRIALS
DRP FORM A

TOTAL ITEMS RIGHT	INDEPENDENT LEVEL (P=.90)	INSTRUCTIONAL LEVEL (P=.75) LOWER BOUND	EXACT VALUE	UPPER BOUND	FRUSTRATION LEVEL (P=.50)
:					
48	39	47	51	55	63
47	38	46	50	54	62
46	37	45	49	53	61
45	36	44	48	52	60
44	36	44	48	52	60
:					

Listing of Textbook Readability

As a component of the DRP technology, a list has been compiled of basal readers analyzed for readability in DRP Units. At the present time the list contains basal readers commonly used in grades 4, 5, and 6. The list will be expanded to include other texts in other subjects at other grade levels.

Each text, when analyzed, is divided into sections by tenths (if it contains at least 200 pages), and three passages are randomly sampled from each of five sections: the first tenth, third tenth, fifth tenth, seventh tenth and last tenth of the book. The Bormuth readabilities for the three passages sampled in each section are then averaged, and this average readability for each of the five sections is given in DRP Units along with the mean readability of all passages analyzed for a text.

An example of an entry for a basal reader is shown below.

Text	1	3	5	7	10	Mean
Beginnings/Endings, Macarone, Macmillan Publishing Co., Inc., 1975, 238 pp.	46	47	47	47	49	47

The text Beginnings/Endings has a mean readability of 47 DRP Units for all passages sampled. As can be seen from the example, the first tenth of this book has a readability value of 46 DRP Units. The third, fifth, and seventh tenths each have a value of 47, and the last tenth of the text has a readability value of 49 DRP Units.

Matching Students With Textbooks

It has long been thought that students need to be properly challenged to learn. When materials are too easy relative to student ability, there is no need for students to work to increase their abilities and they become bored. When materials are too difficult, students may become frustrated and also will not learn at an optimal rate. The optimal difficulty of materials for instruction should be such that students are challenged but not frustrated.

The DRP can be used to match instructional materials to the students' reading capabilities. This should help to prevent the boredom and frustration that may occur when students are faced with materials that are too easy or too difficult for them, and should tend to maximize the effective use of classroom time.

The procedure for determining which materials fall at a given student's instructional level can be seen by referring to Figure 1, page 12. If a student answered 46 items correctly on the DRP Field Trials Form A, then materials falling within the bounds of 45-53 DRP Units are at the instructional level for that student. Referring to Page 12, it can be seen that the reading book Beginnings/Endings has a readability range of 46-49 DRP Units and an average readability of 47. The student with a DRP raw score of 46 (instructional level 45-53 DRP Units) may be expected to be successful in using the text Beginnings/Endings for instructional purposes.

Consideration should be given to factors other than readability in selecting texts for individual students and groups of students. The following section cites some other factors to be considered in the selection of texts.

SELECTION OF TEXTBOOKS

The selection of instructional material to support the district's reading program must be made in the context of the district's philosophy and policies on the organization and management of instruction. If the district is committed to individualization in content, interests and pacing in the program of reading instruction, this must be reflected through the compatability of instructional materials. If the district chooses to use a basal textbook approach, additional materials should be selected to support that program and expand or reinforce the scope of skills outlined in the manuals provided with the basal series.

Activities should be encouraged which relate to decoding, comprehension and study skills.

In addition, the instructional materials should be critiqued to ensure that:

- the subject matter content is accurate
- the materials expand students' general knowledge and experiences
- the materials portray racial, ethnic, and religious groups in a non-discriminatory fashion
- the materials span an appropriate range of readability
- the presentation is appropriate to the developmental age of the learner
- the materials include activities which require the student to communicate ideas in both verbal and written form.

Before a final commitment is made, the materials should be sampled with students. All materials that introduce new teaching approaches should be accompanied by inservice training.

READING COMPREHENSION

The DRP corresponds to current psycholinguistic theory regarding reading comprehension. The following section deals with an instructional viewpoint on reading comprehension which incorporates the psycholinguistic approach. Also in this section are selected strategies for improving reading comprehension which were prepared by the Bureau of Reading Education.

An Instructional Viewpoint

The Regents' Position Paper No. 12 - Reading, published in 1971, defined for the schools a course of action directed toward the improvement of reading instruction. The paper recommended that schools provide a reading program based on "continuous assessment of the strengths and weaknesses which each child brings to the reading process, and continuous involvement of each child in successful learning experiences." In many schools a decided shift has meant acceptance of such educational practices as providing for systematic assessment, establishing or adopting instructional objectives, providing alternate methods and materials, encouraging independence in learning, using appropriate scheduling, and utilizing supportive learning facilities. Through the intervening years since the position paper was published, reading programs incorporating these practices have become more prevalent and have been appropriately described as diagnostic/prescriptive.

Diagnostic/prescriptive programs have helped to make instruction more responsive to learner needs. However, this focus has often resulted in an overemphasis on mastery of a sequence of isolated reading skills with slight attention given to the use of these skills in a realistic reading situation. In some programs decoding skills have been stressed to the point where reading for meaning has been neglected. Careful programming is needed to ensure that instruction in comprehension processes is provided at all grade levels and to avoid delaying comprehension until the decoding skills have been mastered.

The viewpoint expressed in this paper encourages the continued use of a diagnostic approach and urges that teachers assist children in applying logical thinking skills as they read to gather information. In order to so aid students, teachers must know what recent research on comprehension implies for the classroom methodology. They must work with new models of comprehension as they become available, expanding and extending new knowledge into meaningful learning activities for students. They must also have a practical means for assessing student progress in comprehension which reflects ways in which comprehension may be increased through instruction.

Research findings in the field of psycholinguistics indicate that comprehension is an extremely complex thinking process, involving knowledge of syntax, word meanings and context. However, the knowledge of the world the reader brings also aids in accomplishing the reading task. The teacher has a further obligation to give children insights

into ways of using their own knowledge and experiences in combination so that the meanings are further clarified and extended.

Furthermore, the teacher should recognize that written language is characteristically more compact than oral and that oral intonation and gesture are replaced by punctuation symbols. The written word is sufficiently different from speech so that the teacher must help students make the transition from oral to written discourse, minimizing confusions created by the unfamiliar patterns of print.

By reviewing the errors young students often make, the teacher will see that some misunderstandings may often result from the use of figurative language unfamiliar to the child, confusion in pronoun antecedents, or the use of complex relational expressions such as "If it were...." Teachers need also to be aware that young students do not always perceive common inferences which may be immediately understood by adult readers. Therefore, unusual structures, idioms and figurative language must be clarified.

Relevant activities to be used in developing reading comprehension should require students to:

- use context in predicting meanings
- apply subskills commonly described as factors in comprehension to more extended reading materials
- see logical relations among parts of the text
- translate meanings into their own terms so that they may communicate these meanings to others

The ability to assess gains in comprehension which are related to this view of instruction becomes increasingly important to instruction. Current standardized tests are unsuitable for determining reading power as defined in this paper.

However, the Degrees of Reading Power gives such information and has been shown to be culture fair, content valid and reliable. The DRP assesses reading as a psycholinguistic process. It measures the student's ability to comprehend prose passages and thus gain information.

The DRP represents a new concept in testing. Utilizing the Degrees of Reading Power as part of an assessment of reading achievement with the emphasis upon improving instruction will require both training and a technological support system within New York State.

In initiating the use of this test, the State Education Department proposes to help districts to:

- interpret the test results in relation to student reading levels and their powers of comprehension and match materials for instruction to these levels

- provide information and difficulty of textual materials
- formulate improved reading comprehension programs
- train teachers in new instructional strategies
- track students' progress

Districts using the Degrees of Reading Power would then be more able to provide a comprehensive learner-centered reading program, with continuous meaningful assessment of student progress in the area of reading comprehension.

Teaching Strategies

The following six examples represent some suggested strategies which the classroom teacher might find useful in improving students' reading comprehension.

Strategy 1-Key Words

Rationale

Key words may be defined as those which have meanings basic to the sentence or paragraph, indicate the flow of ideas or the relationship of items, and which are useful in retelling the message. Students operate at different levels when attending to key words in sentences as opposed to paragraphs. In the former, they might attend to syntactic relationships and redundancies, while at the latter level they focus on the relationship of information units. Thus, instruction should be directed to the most appropriate area of need and logically from the smaller sentence to the larger paragraph. Students should be asked to recognize the key word concept in sentences presented orally.

Procedure

1. Assemble five sentences of increasing length and complexity (i.e. simple, compound and complex).

2. Read one sentence to the group.
   Example: Billy hit Mrs. Brown's cat.

3. Ask the class to select three words that are absolutely necessary in this sentence. Explain that they should listen for words that name a person or a thing, tell what that person or thing is doing, and identify who or what is receiving the action.

4. Discuss the reasons why certain words are more important than others to the meaning of the sentence.

5. Repeat the first three steps with the remaining sentences.

Example

1. The boy hit Mrs. Brown's cat and ran home.
2. He told his mother that the cat had scratched him.
3. "She's a mean old lady," Billy said, "and her cat is mean, too."
4. His mother shook her head as if she didn't believe him.

Evaluation

Do students evidence an understanding of the concept of the key words? Can they identify the words which bear meaning?

Strategy 2-Signal Words

Rationale

A good reader is aware of signal words that indicate an author's organization of ideas. These fall into such categories as time markers (before, then, soon, finally, etc.); both sides signals (however, nevertheless, etc.); concluding or summarizing signals (therefore, for this reason, etc.).

Procedure

1. Prepare paragraphs.

2. Develop an understanding of signal words by presenting separate lessons on each group.

3. Use these steps:

   a. Prepare a two-sentence paragraph underlining a specific type of signal word.

   b. Instruct students to read the paragraph and discuss the function of the underlined word.

   c. Emphasize the function of particular signal words.

   d. Provide additional two-sentence paragraphs for practice in identifying particular signal words.

4. Create paragraphs for group practice.

Examples

1. Time Markers

Before Mr. Jones became principal, he was an English teacher. Earlier in his life he was a taxicab driver.

2. Both Sides Signals

America is often said to be the land of opportunity, but opportunities come only to those who are able to recognize them.

3. Concluding or Summarizing Signals

Unless you know what kind of person you are, how can you know what you want in life? Therefore, never get yourself so busy you don't have time to know yourself.

Evaluation

Do students' responses and justifications indicate that signal words contribute to the meaning of a paragraph?

Strategy 3-Categorizing-Similarities

Rationale

Students should be able to detect the common characteristics of different items.

Procedure

Open the discussion by asking students how apples and oranges are similar.

Examples of responses:

1. They are both fruit/edible/round/colored/sweet.
2. They both have skin/seeds.

Evaluation

Can the students identify common characteristics in different items?

Extension

Use the following pairs of words for discussion:

cars-trucks
coffee-tea
wrist watches-clocks
tables-chairs
trains-buses
teddy bears-dolls
post offices-libraries
sleds-ice skates
rain-snow

Strategy 4-Categorizing-Form and Function

Rationale

Words have a form (spelling) and a function (meaning). Learning to differentiate is one of the beginning steps in reading comprehension.

Procedure

Ask students to read the following sentences:

1. Helen struck the wrong key on the piano.
2. The children looked at the key to the arithmetic problems.
3. Did you lose your car key?

Point out that the word key is spelled (form) the same way in each sentence, but that it functions in a different way in each sentence. Elicit responses and help students understand the word in various contexts.

Ask students to use the word on the chalkboard to write sentences which will show their various functions. Example: sound, finish, row, leaves, cold, stand, flag, strike, arms, march, etc.

Evaluation

Can students understand and use words which have the same form but different functions?

Strategy 5-Categorizing-Differences

Rationale

In order to comprehend fully, students need to recognize relationships within categories to permit grouping and regrouping.

Procedure

Categorize, with students, the words listed below according to the topics in the chart.

canary	gerbil
puppy	guppy
kitten	hamster
goldfish	parakeet
parrot	mice
pollywog	turtle
rat	tropical fish
guinea pig	bunny

	Pet Store	
Birds	Four-footed Animals	Water Animals

Evaluation

Can students make the necessary distinctions among groups?

Strategy 6 - Vocabulary/Concept Development and Grammatical Structures

Rationale

When given a passage in which words have been deleted, the student should be able to restore the deleted words by looking for cues to meaning in the surrounding text and using what (s)he already knows.

Procedure

Duplicate passages of approximately 225 words, deleting key words and focusing upon nouns, adjectives and adverbs.

Direct students to read the passage and ask them to tell you what they think it is about.

Then ask the following questions: What words can you supply in the blanks that would help the passage make sense? Why is your choice more precise than any other? Which are the best descriptive words?

Example

On the morning of Friday, June the thirteenth, Arthur Brott cut his brother Leo a nice, _____ slice of whole wheat bread, _____ it thoroughly with butter and let it slip suddenly"_____"butterside down onto the floor. Leo _____, and Arthur bent down quickly to wipe up the greasy ____ of butter from the floor. It was a good thing that Becky wasn't down to breakfast yet. She couldn't stand _____. Besides, she had a _____ feeling about bread falling butterside down on the floor. It made her _____, the way black cats and broken mirrors make some people uneasy.

Becky was almost thirteen, and that made her two years older than Arthur and six years older than Leo. Being an older sister, she _____ capably as mother hen on mornings like this one with their mother out of town visiting Aunt Dee, and their father off to the Brott bakery early to prepare fresh loaves of bread. The boys knew that Becky had strange ideas about a number of things - like _____ (never kill them), _____ (never step on them), left toes (never stub them) and _____ (never drop it butterside down). So, they knew to keep quiet and not alarm Becky with _____matters like a piece of _____bread or a dead _____ or two.

By the time Becky came down to the kitchen, Arthur had cleaned up around the scene of the accident and he was sitting at the table beside Leo, who _____ quietly as he lovingly _____ butter onto his third slice of bread.

"I don't think it's a very good idea to sing now," said Becky rather _____ to her brothers as she opened the bread box, "not before breakfast, not on a day like today. You know what they say..."

Provide the following descriptors which were used by the author for later comparison and discussion.

1. thick	7. weird	13. silly
2. slathered	8. uneasy	14. dropped
3. plop	9. substituted	15. spider
4. groaned	10. spiders	16. sang
5. glop	11. cracks	17. smoothed
6. sloppiness	12. bread	18. gravely

Evaluation:

Can students identify descriptive words based on the passage's context? Can they give reasons for choosing certain words? Can they understand why their choices may differ from the author's?

Please address any further questions about the DRP to:

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